ESPRESSIF

Bug Advisory

Title	Bug Advisory for ESP32-C3's Bluetooth LE Disconnection from iPhone in Bluetooth LE and Wi-Fi Coexistence Scenarios
Issue Date	2023/06/16
Advisory Number	AR2023-002
Serial Number	NA
Version	V1.0

Issue Summary

For the ESP32-C3 series of products (including the ESP32-C3 series of chips, modules and development boards, as well as the ESP8685 series of chips and modules) developed and produced based on specific ESP-IDF versions, the Bluetooth LE ACL connection between them and certain new iPhone models will disconnect soon after establishment when Wi-Fi and Bluetooth LE are used at the same time.

The reason is that, after establishing a Bluetooth LE ACL connection, new iPhone models (including but not limited to iPhone 13 running iOS 15.6.1 and iPhone 12 running iOS 15.4.1) will switch to LE 2M PHY, but the LE 2M PHY is not configured properly in Bluetooth LE and Wi-Fi coexistence scenarios in ESP-IDF. The improper configuration leads to data transmission failure and ultimately causes the connection to break.

Affected ESP-IDF versions are:

ESP-IDF Branch	Affected Commit IDs	Affected Release Versions
master	cea66141 to 5838c2ec (excluded)	-
release/v5.1	cea66141 to e8dba711 (excluded)	v5.1-beta1
release/v5.0	9406e80d to 5a68c496 (excluded)	v5.0.1, v5.0.2
release/v4.4	8b24bbd9 to 1071b13c (excluded)	v4.4.4
release/v4.3	c3d47417 to 3a10cc9e (excluded)	v4.3.5

Patched Versions of ESP-IDF

ESP-IDF Branch	Fixed Commit ID	Fixed IDF Version
master	5838c2ec	expected in v5.2
release/v5.1	e8dba711	expected in v5.1
release/v5.0	5a68c496	expected in v5.0.3
release/v4.4	1071b13c	v4.4.5
release/v4.3	3a10cc9e	expected in v4.3.6

Recommendations for Application Developers

When you develop the ESP32-C3 series of products or upgrade ESP-IDF versions used for the ESP32-C3 series, it is recommended to use patched ESP-IDF versions mentioned above or versions after the patch commit. If you encounter problems during the upgrade process, please provide the IDF version or Commit ID to Espressif. We will confirm and handle related matters as soon as possible.